

DENTAL HEALTH, LARYNGOPHARYNGEAL REFLUX DISEASE (LPRD) AND FOOD

**Adis Salihefendić, Nizama Salihefendić, Muharem Zildžić, Emir
Čabrić**

¹Department of Emergency Medicine, Faculty of medicine, University of Tuzla,
Medicus A Gracanica, Gracanica
Polyclinic and Primary Health Care Center Dobojuj
, Bosnia and Herzegovina

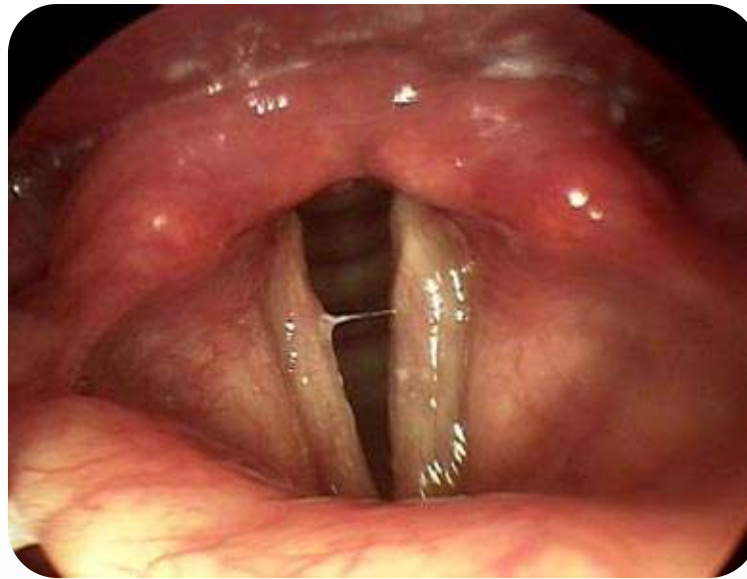
AIM

1. is to emphasize that an early diagnosis with non-invasive procedures (PEPTEST) and specific dietary measures in nutrition can play an important part in prevention and treatment dental erosions related with LPRD



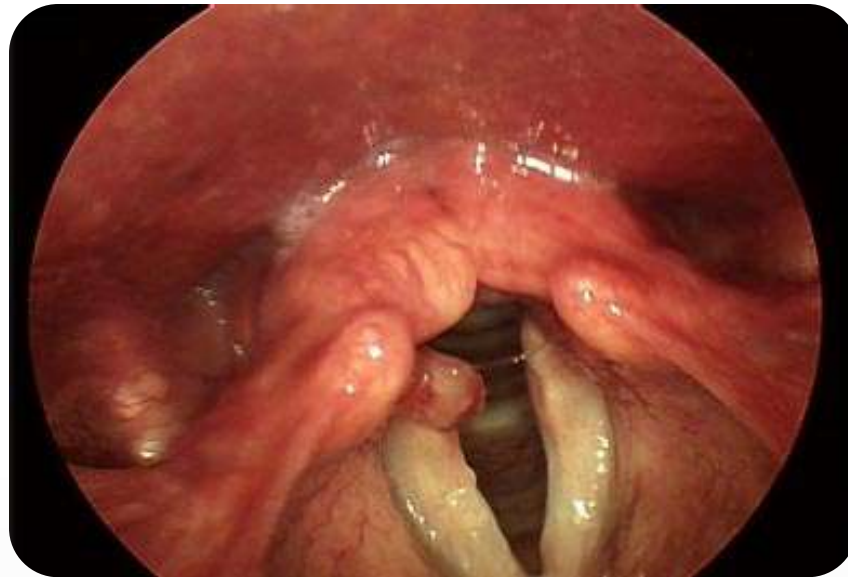
LPRD

- Laryngopharyngeal reflux disease (LPRD) refers to erosions mucosal membrane of mouth, pharynx, larynx and other associated respiratory organs, caused by a reflux of stomach content.



LPRD

- LPRD is most commonly manifested as laryngeal symptoms, but disorders in mouth cavity, nose and sinus are common, too. Prevalence of this disease is extremely high so it can be one of common cause of patient visit to doctor of stomatology and family medicine.

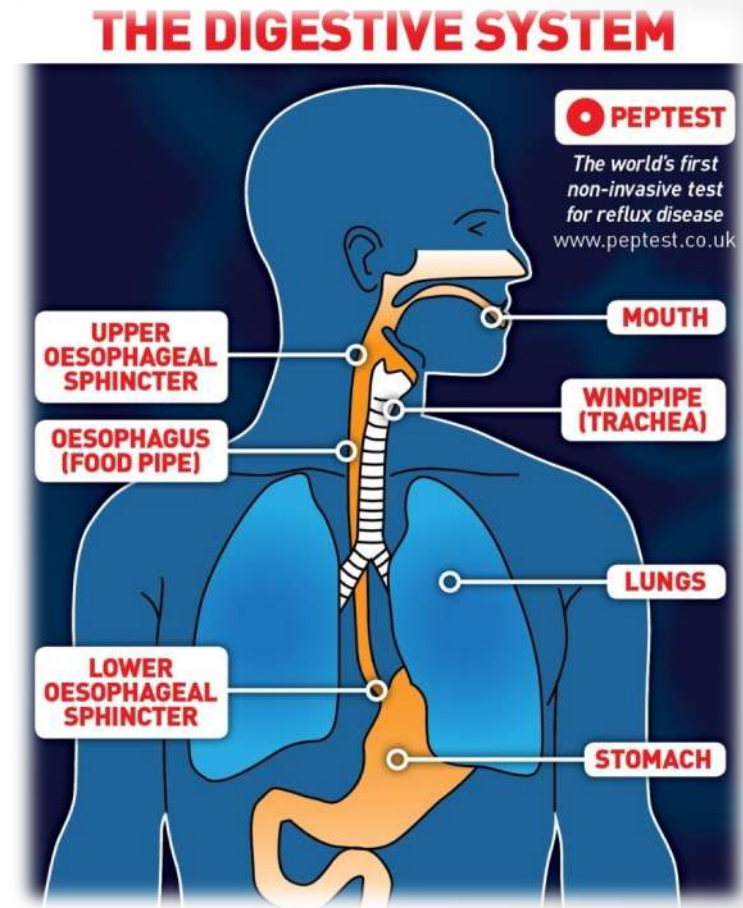


Diagnosis

- Pepsin has strong proteolytic effects on the oral mucosa and teeth. Evaluation of symptoms using the questionnaire: the Reflux Symptom Index (RSI) is considered to be the basic diagnostic procedure. A newer method of determining pepsin in saliva - peptest, can confirm presence of pepsin in oral cavity and LPR diagnosis .

Why is it important to detect pepsin?

- Clinical measurement of pepsin is important as it can give an objective assessment of the presence of reflux in a patient and help to make a diagnosis. Evidence shows that compared to acid alone pepsin is damaging to the oesophagus and laryngeal tissue.

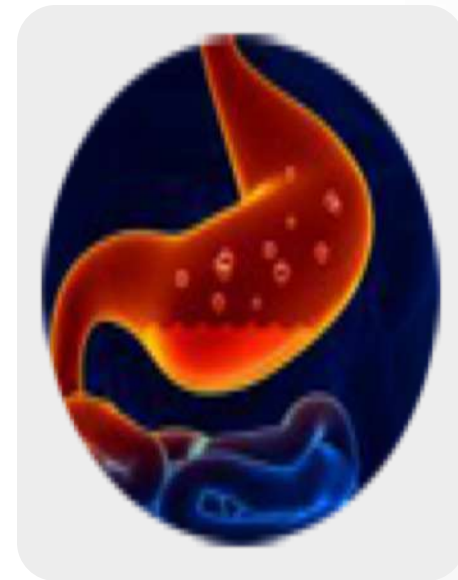


PEPTEST

- The Peptest kit is an immunological in-vitro diagnostic medical device that contains two pepsin monoclonal antibodies; it allows you to identify pepsin in a clinical sample of saliva/ sputum quickly and easily.
- No specific training is required to use Peptest but it is designed for use by healthcare professionals.
- You can order Peptest kits for use at your facility and we also invite researchers to our laboratory for pepsin diagnostics



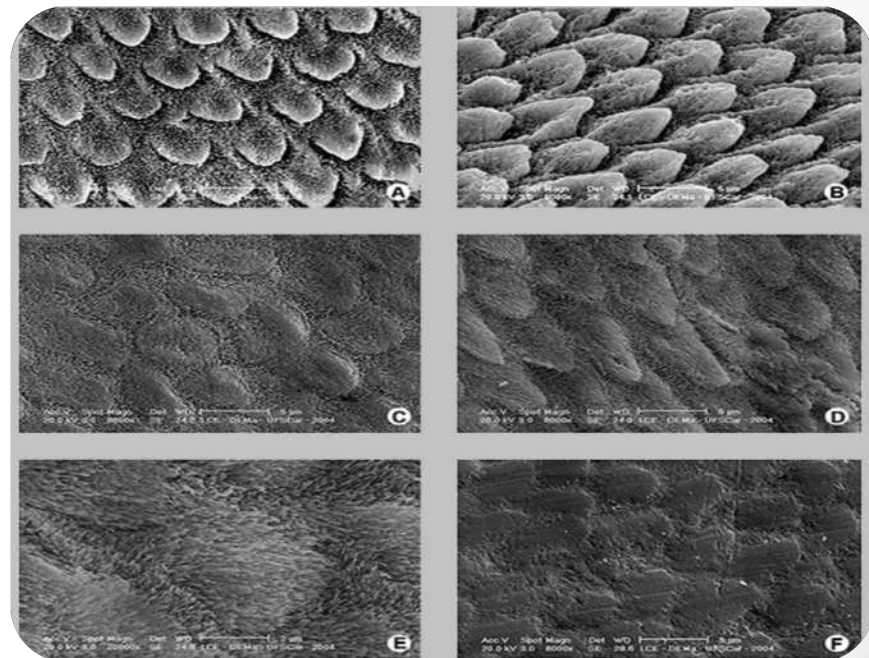
- Pepsin, which originates from the Greek word for digestion, is the enzyme responsible for the digestion of protein. More specifically, pepsin is a protease originating from pepsinogen secreted into gastric juice from chief cells and is only found in the stomach



Is pepsin dangerous?

The stomach's mucous-producing lining protects it from auto-digestion by pepsin. However, if pepsin refluxes into pharynx, larynx and mouth it can be very damaging as the tissue lining is more sensitive, especially the dental structures.

Dental enamel shown on electronic microscope. Fase A to F show weekly progress of the enamel prism solving caused by an acid (pH lower than 2.3)



Dental Health

LPR is a reflux of abdominal content in the esophagus, throat, larynx and the oral cavity. It manifest with laryngeal symptoms, oral cavity erosions especially teeth.

The prevalence of the disease is extremely high, it can be one of the common causes for a visit to a dentist and family medicine doctor. The content of the stomach is one of the most important causes loss of tooth structure, but without any symptoms up to an advanced stage. Solving of the dental enamel begins at pH 5.5. The content of the stomach has a very low pH of 1.5-3.

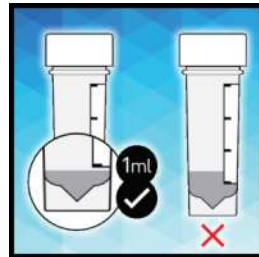
Acid foods and content activate pepsinogen in pepsin that causes progressive erosion of tooth enamel and mucous membranes. New way of determining pepsin in saliva PEPTEST, confirms the presence of pepsin in the mouth.



Erosions on dentes permanentes shown on upper and lowe jaw.

Why is it important to detect pepsin?

Clinical measurement of pepsin is important as it can give an objective assessment of the presence of reflux in a patient and help to make a diagnosis. Evidence shows that compared to acid alone pepsin is damaging to the oesophagus and laryngeal tissue.



Statistics

- Peptest is a highly accurate diagnostic test with performance measures validated in several clinical tests, as indicated below:
- Sensitivity: 95%
Specificity: 89%
Pepsin detection limit: 16 nanograms per millimetre (16ng/ml)
- Peptest will measure the concentration of pepsin in your saliva to show the severity of reflux and give a benchmark to assess the success or failure of any treatment. The detection limit of 16ng/ml is the lowest amount of Pepsin that can be measured.

Therapy of LPRD

Modification of lifestyles
and habits

- Body weight
- Alcohol
- Smoking
- Emptying the gut
- Medicines
- PPI
- Alginats

- Nutritional interventions
- Base food and water



Extremely Base Foods



Extremely sour foods

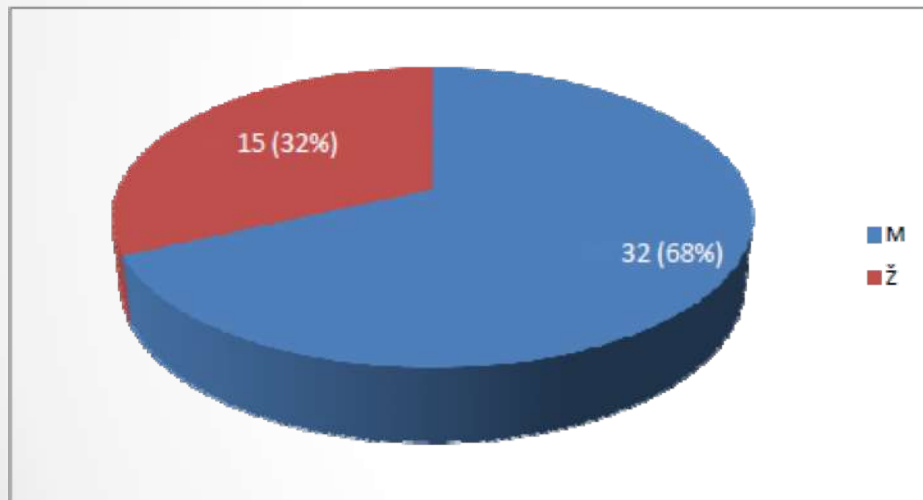


Moderate Base Foods

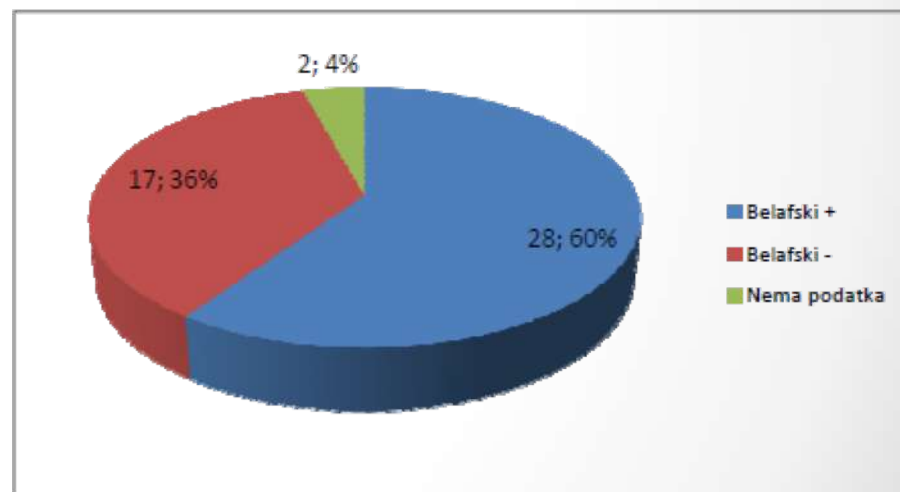


Moderate Acid foods

Ukupno pacijenata	M	Ž
47	32	15

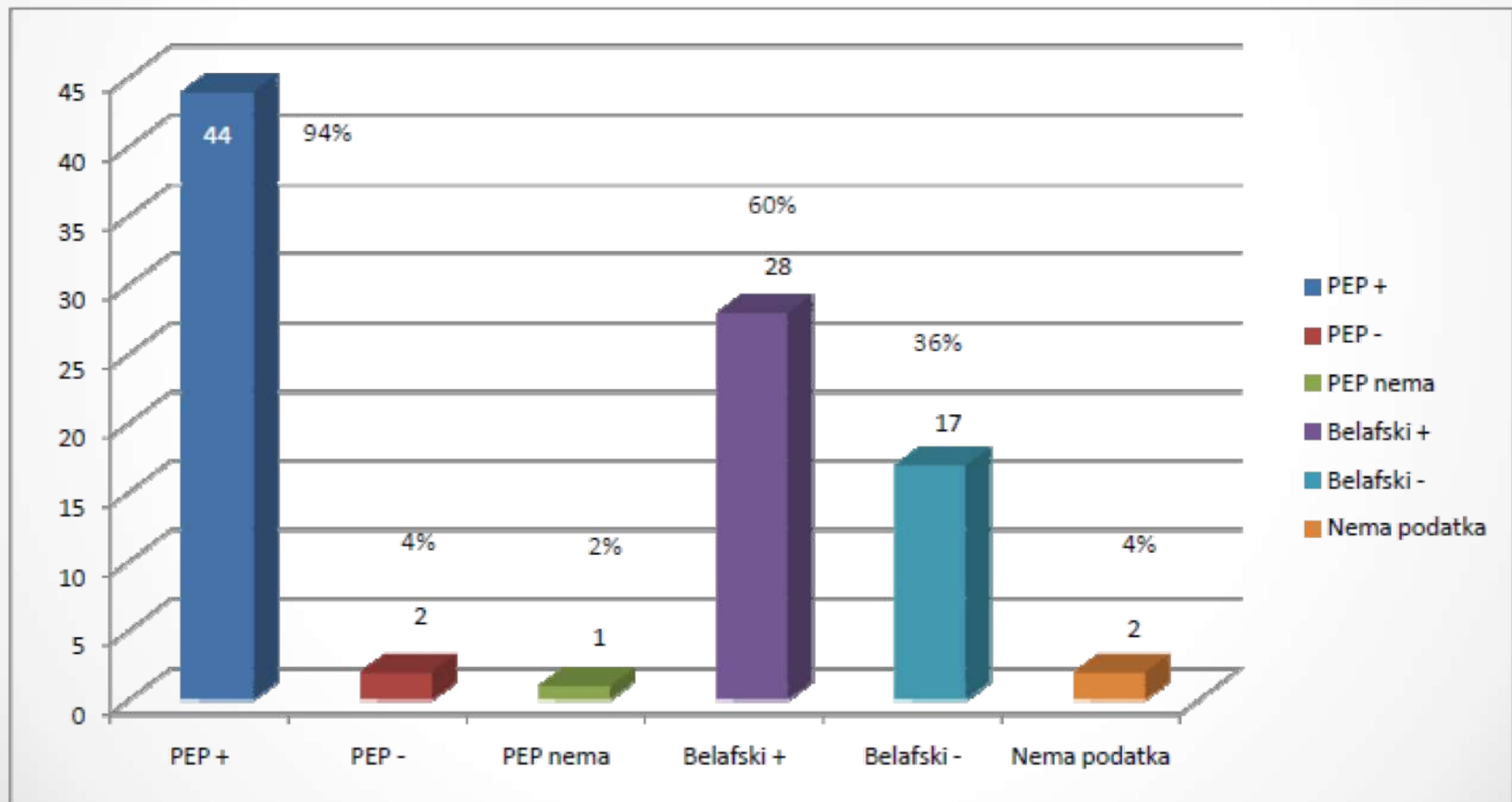


Ukupno pacijenata	Belafski +	Belafski -	Nema podatka
47	28	17	2

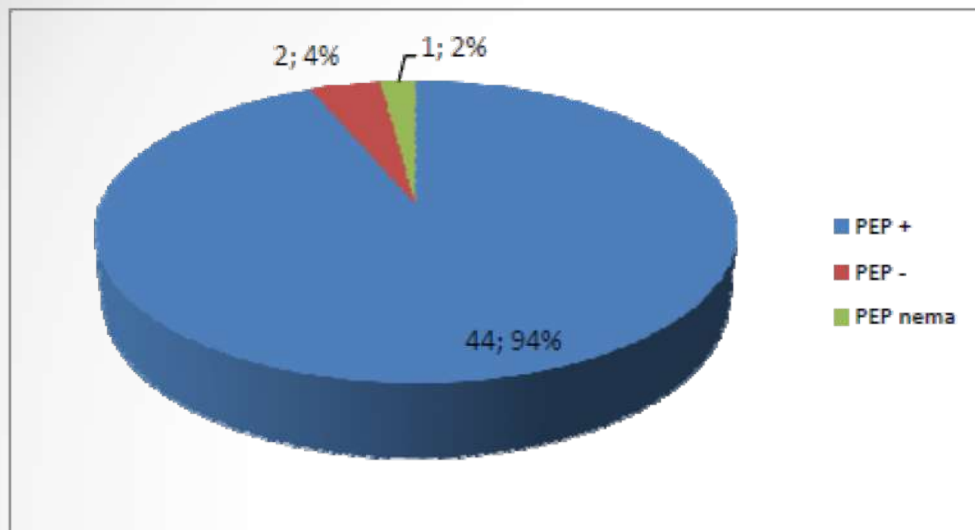


Ukupno pacijenata	PEP +	PEP -	PEP nema
47	44	2	1

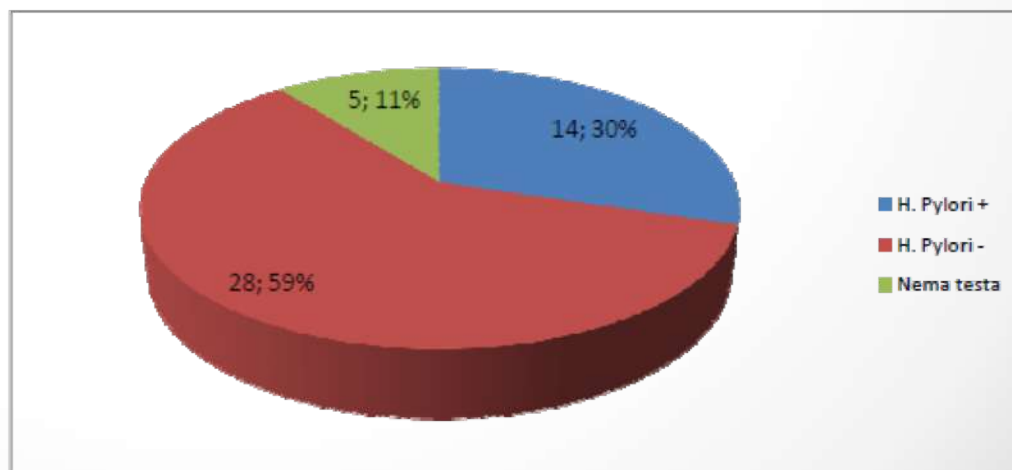
Ukupno pacijenata	Belafski +	Belafski -	Nema podatka
47	28	17	2



Ukupno pacijenata	PEP +	PEP -	PEP nema
47	44	2	1



Ukupno pacijenata	H. Pylori +	H. Pylori -	Nema testa
47	14	28	5



- Positive results of the PEP test from this group had 46 patients (or 92 %). This patients group was treated according to the proposed protocol using basic methods of modifying lifestyles, alkaline water and food, alginates, and high doses of proton pump inhibitors. All patients had an adequate improvement of the disease condition while treated using the basic procedures.

Summary

- Many general conditions like as LPRD can be the course of disorders of dental health. Almost 50 % patients in family medicine and dental practice have symptoms of LPR. Treating reflux acid dental erosions without preventing LPRD can leads to more severe problems in dental health. Healthier eating lifestyle, alkaline water and food regimens, and high doses of proton pump inhibitors (PPIs) can permanently inhibit the activation of pepsin in oral cavity can prevent dental erosions.